



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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EPA Region 5 Records Ctr.



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REPLY TO THE ATTENTION OF

May 3, 2004

Roy Ball
Environ Corporation
740 Waukegan Road
Suite 401
Deerfield, IL 60015

Re: EPA comments on Screening Level Ecological Risk Assessment-Eagle Zinc site

Dear Roy:

Enclosed you will find comments on the document referenced above.

General comments

A major insufficiency in the SLERA was the lack of assessment of on-Site terrestrial and aquatic receptors. This was communicated by EPA to the Parties at the February 2004 meeting.

The reasons for this omission included the future land-use, the size, quality, and type of on-Site habitat, and the value of the on-Site ecological resources to be protected. Because the intended future land-use on-Site will be commercial/industrial, it is suggested in the SLERA that evaluation of the ecological receptors on-Site is not necessary. It is advisable to evaluate all current conditions in the SLERA, such that risks will be understood should development not occur in a timely fashion. Ready-for-Reuse (RfR) Determination (USEPA, 2004) was indicated as a key component in the development of the Site. In the RfR guidance (USEPA, 2004), RfR Determination will not occur until, "*the site meets CERCLA standards of protectiveness.*" Because the current level of risk on-Site has not yet been determined and the time until

development is uncertain, the CERCLA standards of protectiveness will not be met. RfR determination also does not guarantee that development will occur, therefore, adverse ecological effects, if present would continue.

Furthermore, the area of development has not been presented, but if it is limited to only the former Buildings and Manufacturing Area, a large area on-Site that provides habitat to ecological receptors will not have been assessed and appropriately addressed.

Inadequacies in the size, quality, and type of on-Site habitat were also cited as a reason not to evaluate on-Site ecological receptors. The following excerpt from the SLERA summarizes the decision not to assess on-Site receptors: (Page 23; Paragraph 4) "*... the available on-Site habitat is not of the size, quality, and type that is supportive of sustainable wildlife populations, communities, and ecosystems.*"

The habitat on-Site is of a sufficient size to evaluate risk to ecological receptors from current- and future-use. As defined by USEPA (1997), habitat is a, "*Place where a plant or animal lives, often characterized by a dominant plant form and physical characteristics.*" This area is partitioned into habitats in Figure 4-2 of the SLERA by the dominant plant forms (woods, mixed woods, and old field) and is connected to adjacent off-Site areas of similar habitat. Note also that the adjacent land to the north and south of the western drainage way area was described as good songbird habitat in the SLERA (Page 18; Paragraph 1). Terrestrial habitat of this size could support a terrestrial wildlife community of songbird and small mammal populations as defined by the USEPA (1992) definitions of community ("*An assemblage of populations of different species within a specified location and time*") and population ("*An aggregate of individuals of a species within a specified location in space and time*").

Rather than estimate the number of individuals of a species on-Site, SLERA guidance dictates conservative assumptions, as noted in the following excerpt:

"For the screening level exposure estimate for terrestrial animals, assume that the home range of one or more animals is entirely within the contaminated area, and thus the animals are exposed 100 percent of the time."

This conservative assumption captures a scenario where the Site acts as a "sink" (adverse effects, including lethality, occur in individuals exposed to on-Site contaminants) for regional populations of migratory and resident populations of birds and mammals.

The community and terrestrial habitat area should also be considered an ecosystem according to USEPA (1997) definition ("*The biotic community and abiotic environment within a specified location and time*"). According to the USEPA definitions, an aquatic ecosystem on-Site consists of community of fish, amphibians, and invertebrate populations in the southwest Pond and drainage ways.

The lack of valuable ecological resources was also presented as a reason for not evaluating on-Site receptors. For example, although deer and raccoon were observed on-Site, they were described as "*often considered nuisance species*" that "*do not constitute valuable ecological resources as defined in EPA guidance (EPA, 2001).*" Note that the citation (which should be corrected to EPA, 2001a) is a discussion document and not actual

USEPA SLERA guidance. However, in this discussion document “valuable” ecological resources were not defined, but game species, such as white-tailed deer, were considered of societal value. Species with societal value were also listed as a possible criterion to identify ecological entities to protect in another cited USEPA discussion document (USEPA, 1997b). This criterion was listed in the SLERA, along with “ecological significance,” for which examples were not given, but would include lower trophic receptors such as invertebrates that are expected on-Site.

USEPA SLERA guidance (USEPA, 1997) has assessment endpoints as any adverse effects on ecological receptors, where receptors are plant and animal populations and communities, habitats, and sensitive environments. Subsequently, the following changes (and subsequent modifications) to the SLERA are needed:

- Assessment of effects to on-Site terrestrial receptors. Terrestrial receptors may include, but are not limited to invertebrates, white-tailed deer (herbivorous mammals), American robin (omnivorous birds), and the red-tailed hawk (carnivorous birds).
- Assessment of effects to on-Site aquatic receptors. Aquatic receptors may include, but are not limited to, benthic invertebrates, water-column invertebrates, fish, amphibians, raccoons (omnivorous mammals), great-blue heron, and mink.

It is also recommended that two future scenarios be evaluated: development and the status quo. This will provide the decision-makers with the best and most complete information on the environmental aspects of the property upon which to base a decision.

Specific Comments

Many of the changes to the SLERA that are necessary because of the General Comments were not included in the Specific Comments. An assessment of on-Site receptors in the SLERA will result in numerous changes that are not listed below. Note also that changes in Sections 2 to 9 should also be reflected in the Executive Summary.

1. Page 1 par 3. See comment made for human health risk assessment regarding future site use.
2. Page 2; Bullet 1: Remove or modify the description of the habitat as “unremarkable” because it is ambivalent does not have direct relevance to the evaluation of potential ecological risk (the fact that no “sensitive habitats” are present is directly relevant) and it implies that only distinctive habitats qualify for Ecological Risk Assessment, which is not correct.
3. Page 3; par 1: Remove or modify the following statement, “*Due to marked physical disruption and resultant degradation of habitat on-Site, it does not support wildlife*”

populations, communities and ecosystems." See the General Comments. The habitat on-Site supports wildlife populations, communities and ecosystems. This was confirmed during the March 2004 site visit and is well documented with photographs.

1. Page 3 par 2: Remove or modify the following statement, "*Thus, the available data indicate that Site-related ecological impacts (if any) in the off-Site and Western and Eastern Drainage Areas are spatially limited.*" The statement as written cannot be supported because of the small number of samples (no more than four) sampled within each area designated in Table 4-3. It is also inappropriate to include risk management language in sections that are calculating environmental risks.
2. Page 3; par 3: Remove or modify the following statement, "*Therefore, additional information may be necessary to determine what, if any, further evaluation of Off-Site surface water and sediment is warranted for protection of valuable ecological resources.*" This is not a suitable Scientific Management Decision Point. See comment for Section 8 (comment #). It is also unclear what additional information is being referenced here-the purpose of the SLERA is to calculate risks but also to identify additional data necessary to remove or reduce the uncertainties presented here-this has not been done.
3. Page 3 par 4: Remove or modify this paragraph. A correctly accomplished SLERA, which this is not, is a *reasonable* worst-case scenario with attended uncertainties and conservative assumptions. It typically over predicts exposure, but it could also under predict exposure.
4. Page 10 indented par. In our February meeting, EPA indicated that substantial documentation was required before this statement could be considered for use in the risk assessment-this was not provided. There are several caveats included in this statement which place substantial conditions on future site use. The first is that this scenario is contingent on a mutually acceptable agreement between the site owners and the City of Hillsboro. The second is that the environmental aspects of the property need to be acceptable to both parties before property transfer is completed. This has nothing to do with calculation of risks and is entirely dependent on the final remedy decision at the site, which is well in the future. Therefore, if this statement is to be considered further, the following two stipulations must be included: 1) Institutional controls must be placed on the property immediately by the current owner restricting any future use at the site to commercial/industrial and 2) all conditions that EPA has highlighted in this comment must be removed from this statement from the Planning Commission.

5. Page 11 1st two lines. Remove or modify the following statement, "*Therefore, this SLERA is based on the City's and owner's mutual intention that future land use at the Site will remain commercial/industrial.*" A SLERA should be conducted to estimate the likelihood that a particular ecological risk exists. A SLERA should not be performed under only a future land-use scenario and without evaluating the current ecological risks. The intent of risk assessments is to calculate baseline risks under current conditions, which is then used in the FS to develop and screen alternatives.
6. Page 11; Bullet 3. Remove the statement concerning the level of impact to the Northern Area. The level of impact to this area has not been established in the document.
7. Page 12 par 3. Please note that even though physical stressors may be present on- Site, the contribution from chemical stressors must be fully understood. If, for example, natural events were to alter habitat, the potential for inhibition of vegetative regeneration must be understood. Likewise, the potential for chemical stressors to increase susceptibility to disease should also be understood.
8. Page 13 par 2. Remove or modify the overall goal of the SLERA ("*ensure that COPECs associated with former Site operations do not adversely impact water quality and habitat conditions in off-Site drainage areas*") because this has not yet been established in the document with a problem formulation or the selection of assessment endpoints. A general goal, such as preservation of ecological integrity or that stated in the Introduction (..."*evaluate whether potential exists for unacceptable risk relative to valuable ecological resources*") would be more appropriate at this point in the document because it does not preclude the problem formulation and the selection of assessment endpoints.
9. Page 15 par 1. Change "*as wells*" to "*as well*".
10. Page 15 Bullet 1. Remove or modify the description of the habitat as "*unremarkable.*" Remove or modify the description of the habitat as "*unremarkable*" because it is ambivalent does not have direct relevance to the evaluation of potential ecological risk (the fact that no "*sensitive habitats*" are present is directly relevant) and it implies that only *distinctive habitats* qualify for Ecological Risk Assessment, which is not correct.
11. Page 16 incomplete par. Remove the comment that terrestrial species observed during the Site visit all have access to superior habitat in the area. Superior habitat off-Site is not relevant to the evaluation of on-Site habitat.

12. Page 16 par 1. The unknown cause of the tree die-off is another reason to evaluate on-site terrestrial resources because it may be the result of on-site activities.
13. Page 16 par 2. The possibility that the undeveloped nature of the northern area attracting ecological resources which would then potentially be exposed to other areas of the site should be evaluated here. It is unclear what point the last sentence is trying to make. Are the only physical stressors on-site related to the residue piles? The two samples in the northern area are not sufficient to rule out any impacts from the residue piles without understanding the potential migration of materials from the piles, which is typically done by modeling movement using available meteorological data, such as wind direction and speed.
14. Page 16 par 3. Remove this paragraph. See the General Comments above concerning what wildlife the site could support and the value of this wildlife. Furthermore, common species are not precluded from risk evaluation. In fact, common species are frequently evaluated, often because exposure parameters and toxicology information is readily available. The condition of the former operational areas does not preclude the potential for other habitat areas on-site attracting ecological resources which would then be exposed to the contaminated operational areas through normal movement.
15. Page 17 par 2. Remove or modify the following statement, "*None of the on-Site drainage features are of sufficient size or quality to support valuable ecological resources. However, the off-Site Western and Eastern Drainage Areas are further evaluated in this SLERA.*" See General Comments above and note that it directly contradicts the statement in paragraph 2, "*In July, basking turtles were observed in the east end of the pond, as well as dragonflies and frogs*" and the statement on page 19, par 3, "*Wildlife observations included whitetail deer tracks, raccoon tracks, turtle burrows, frogs, crayfish holes and an eastern box turtle in a creek burrow.*"
16. Page 19 par 1. Change or remove the following statement, "*The source of the precipitate is unknown, but the fact that it had been observed upstream of the Site on prior occasions suggests that there may be upstream sources or causes of the observed precipitation.*" At the March 2004 Site visit, discoloration was observed to intensify where on-site residue piles were eroding into the drainage. It is also unclear what documentation exists to support the statement that this precipitate was present previously. Is there photographic documentation available?

17. Page 19 par 2. Include reference or calculations for estimate of 20-fold dilution potential from confluence of tributary to Middle Fork Shoal Creek. See comment 18 above regarding wildlife observations.
18. Page 21 par 1. Change or remove the following statement, "*As the off-Site soil samples collected by IEPA in 1993 were well-distributed around the Site, the available data do not indicate that off-Site migration of COPECs through wind deposition has occurred.*" This statement cannot be supported because 1) only 14 off-site soil samples were collected by IEPA in 1993 (two of the 16 samples, X104 and X110, collected by IEPA in 1993 were actually collected inside the site boundaries , and 2) many of the samples collected by IEPA were located upwind (south) of the residue piles. As noted on page 21, par 1, the prevailing wind direction from the site is from the south and southwest.
19. Page 22 incomplete par. Change or remove the following statement, "*However, NPDES sampling at the surface water outfalls conducted prior to permit cancellation in May 2003 demonstrated that current conditions on the Site would not result in off-Site impacts.*" The sentence as written cannot be supported. According to the March 2002 Preliminary Site Evaluation Report, chromium, copper, and zinc exceeded Illinois General Water Quality Standards (35 IAC 302 Subpart B) at Outfall 002. It is also unclear whether the NPDES permit required sampling for the same parameters as the RI sampling was done for.
20. Page 22 par 1. Change or remove the following statement, "*The fact that no dissolved metals were detected above applicable groundwater screening levels...*" Dissolved manganese concentrations were detected on-Site at G-102 above the screening level. Is there available water level data that can support the statement that groundwater is "believed" to flow to the SW or E/SW?
21. Page 22 par 1: Change or remove the following statement, "*Based on the limited off-Site extent of groundwater impacted by dissolved metals concentrations to the southwest of the Site, it is similarly concluded that groundwater discharge is not a significant pathway for the off-Site transport of COPECs to the southwest.*" Only three wells were monitored off-Site in the Western Drainage way and all had dissolved manganese concentrations that exceeded screening levels.
22. Page 22 par 2. Change the following statement, "*Groundwater discharge to surface water similarly does not appear to be a complete pathway for off-Site transport of COPECs in either the Eastern or Western Drainage Areas*" to "*Groundwater discharge to surface water similarly does not appear to be a significant pathway for off-Site transport of COPECs in either the Eastern or Western Drainage Areas.*" See previous

comment about NPDES sampling data-it does not appear to support this statement due to the smaller analytical list.

23. Page 23 par 1. Remove the comment that terrestrial species observed during the Site visit all have access to superior habitat in the area. Superior habitat off-Site is not relevant to the evaluation of on-Site habitat nor is there evidence to support this statement presented in this SLERA.
24. Page 23 par 3. Remove or modify the following statement, "*Of these eight ecological entities, the only one potentially relevant to the Site is off-site aquatic communities in the Eastern and western Drainage Areas.*" Aquatic communities, native species and their habitats, and wetlands are present on-Site.
25. Page 24 incomplete par. Change or remove the following statement "*On these bases, evaluation of potential chemical to on-Site aquatic and terrestrial resources was not considered to be an appropriate objective for the SLERA.*" This is disputed in the General Comments above. On-site resources should be evaluated. The reference to Reilly Tar in Indiana is not a good one as habitat was destroyed by previous industrial operations which is not the case at the Eagle Zinc site. List the specific provisions in the guidance (USEPA 1997) used to determine that relevant and/or significant are not present on-Site. These provisions could not be identified.
26. Page 24, par 4. Because VOCs were detected on-site they should be considered COPECs and compared to screening guidelines.
27. Page 25, Bulleted list of COPECs: Add manganese and the VOCs to the list.
28. Page 26 par 1. Where is the justification for the statement regarding endangered species and what is meant by the statement that off-site areas are too small to support habitat-if this is being used to discount off-site contamination and its impacts on ecological resources, this must be modified or removed.
29. Page 27 par 2. Change "*While of mink*" to "*While mink*".
30. Page 27 par 3: Change or remove the following statement, "...these organisms represent species that are likely to receive the highest exposure to COPECs." The SLERA exposure estimates for these organisms are the highest for only those organisms with the same exposure routes (piscivores). Other species with different exposure routes may receive higher exposures. This stipulation should be noted to prevent confusion.

31. Page 28 par 2. Recommendation is to include benchmarks for COPECs from additional sources if there is no applicable National or Illinois WQC. Specifically, the Secondary Chronic Values (SCVs) from Suter and Tsao (1996) are recommended. COPECs that are not evaluated in the SLERA because benchmarks were not available are carried forward to the BERA.
32. Page 28; Equation. Include reference or supporting information to indicate if the equation is the regulatory promulgated equation to calculate hardness for Illinois WQC.
33. Page 29 par 2 Appendix E. Recommendation is to include wildlife benchmarks from additional sources if there is no benchmark available in Sample et al. (1996). COPECs that are not evaluated in the SLERA because benchmarks were not available are carried forward to the BERA.
34. Page 31 bullets 1 and 2. Recommendation is to re-name the "off-Site Background" areas to prevent confusion with those background areas identified in Section 4.1.2.3. The off-site Background locations have not been shown to have concentrations unrelated to off-Site releases. In the Western Drainage way, the WD-11 location is approximate, and the WD-10 location may be impacted by erosion of on-Site residue piles. In the Eastern Drainage way, the ED-11 location is only approximately 100 feet north of the Site boundaries.
35. Page 31 bullet 3. Please provide a description of the East off-Site far field (Lake Hillsboro) sample data. These data are used to interpret trends in the SLERA, but no information is provided to determine their usability, such as sample locations in the Lake, conditions during the sampling events, sampling methodology, and detection limits.
36. Page 33 Section 7.1. Add comparisons of sediment data to classification levels presented in IEPA's *Evaluation of Illinois Sieved Stream Sediment Data; 1982-1995* (1997).
37. Page 34 Section 7.1.1: Include a summary of the exceedances for manganese that are missing from Table 7-1 because other exceedances are also described. See comments for Table 7-1 and Appendix G below. A pattern of decreasing contaminant concentrations with distance as little relevance to whether there is ecological risk. Because no calculations were provided, these claims are unsupported. It is also irrelevant whether Environ thinks that the exceedances are significant or not, as risk is calculated with all exceedances.

38. Page 34 par 2. Change or remove the following statement, "*A slightly elevated HQ for aluminum was observed in far field sediment, but not in surface water, and in neither medium at the near field and background locations.*" See comments for Table 7-1 and Appendix G below. The calculations to support this statement are incorrect.
39. Page 34 par 5. Change or remove the following statement, "*The zinc HQ for sediment was also greater than 1 at the background west location (the only exceedance observed in either medium there).*" An exceedance was observed in surface water but the detection limit was too high. See comments for Table 7-1 and Appendix G below.
40. Page 34 par 6. Change or remove the following statement, "*Copper, lead, and manganese HQs were all slightly elevated in near field sediment, but not surface water, while the HQ for nickel was slightly elevated in near field surface water but not sediment. These low exceedances in one medium...*" The nickel HQ in sediment at this location exceeded one. See comments for Table 7-2 and Appendix G below.
41. Page 36 par 1. Change or remove the following statement, "*The fact that similar exceedances for aluminum were observed in both background and near field suggest that the presence of this metal is not Site-related.*" The off-Site background location should not be considered as having concentrations unrelated to on-Site concentrations, or vice versa, because it is only approximately 100 feet off-Site. See SLERA comments for page 22, par 2.
42. Page 36 par 1. Change or remove the following statement, "*No exceedances were observed at the far field location....*" Exceedances were observed for aluminum, cadmium, selenium, and zinc based on non-detects.
43. Page 36, Section 7.3. Summarize those COPECs that were not evaluated because benchmarks could not be located. These COPECs should be evaluated further. COPECs that not evaluated are automatically carried forward as COPECs to the Baseline Risk Assessment.
44. Page 36 par 2. Change the following the statement, "*For this SLERA, a few inorganic analytes were detected at maximum concentrations that are associated with HQs greater than 1.*" To "*For this SLERA, eight inorganic analytes were detected at maximum concentrations that are associated with HQs greater than 1.*"
45. Page 36 par 3. Change or remove the following statement, "*HQs for lead and copper were elevated in sediment but not surface water, suggesting that these metals may not be bioavailable.*" Because hazard quotients for exposures based on ingestion of sediment-dwelling biota were not calculated, this statement can not be

supported. Recommendation is to include a ROC that captures this exposure pathway.

46. Page 37 par 2. Change or remove the following statement, *"In summary, the results of the SLERA indicate that the potential for adverse impacts to ecological receptors in both Western and Eastern Drainage Areas, if any, would likely be associated with the presence of zinc and cadmium in surface water and sediment, and is of limited spatial extent."* As stated in the SLERA (Section 7.0 and Table 7-5), there is no clear guidance to interpret the level of risk for COPECs with HQs that exceed one in a SLERA. Because exceedances were observed for several inorganics, all could be associated with adverse impacts. Similarly, the spatial extent should also not be determined using the magnitude of exceedance, as exceedances were also observed in far field locations.
47. Page 38 par 1. Change or remove the following statement, *"The results of this SLERA indicate that elevated HQs for selected ROCs in the near field Western and Eastern Drainage Areas are related to locally elevated levels of zinc and cadmium in surface water and sediment."* The local area was not defined, but, if the intention was to describe elevated levels as only in the near field, this statement is not correct because exceedances were also observed in the far field. Furthermore, HQs were also elevated for eight COPECs in the near field and/or far field.
48. Page 38; Paragraph 1: There are only two possible decisions at this point for the Eagle Zinc Site:
 - 1) The information is not adequate to make a decision at this point, and the ecological risk assessment process will continue to Step 3; or
 - 2) The information indicates a potential for adverse ecological effects, and a more thorough assessment is warranted.

The statement that *"Additional information **may** be necessary to determine what if **any** further evaluation of Off-Site surface water and sediment is warranted for protection of valuable ecological resources"* (emphasis added) is not an adequate Scientific Management Decision Point.
49. Table 7-1: Aluminum/Surface Water/Background West - Change null value to 2.
50. Table 7-1: Iron/Surface Water/Background West - Change null value to 1.
51. Table 7-1: Cadmium/Surface Water/Near field - Change from 12 to 8 (and Figure 7-2).

52. Table 7-1: Zinc/Surface Water/Near field - Change from 457 to 292 (and Figure 7-1).
53. Table 7-1: Add a row for Manganese and insert a value of 1 for Manganese/Sediment/Background West.
54. Table 7-2: Remove column for Sediment/Far field to prevent confusion. These data were not available.
55. Table 7-2: Nickel/Sediment/Near field - Change null value to 1.
56. Table 7-3: Cadmium/Great Blue Heron/Far field - Change null value to 1. What medium are the two piscivores exposed to? This comment also applies to Table 7-4.
57. Table 7-5. There may be impacts to background areas that are not discussed in this SLERA. There is an inconsistency in the table that "tolerance and adaption are not considered directly" and the use of "adaptation" to indicate a lack of risk/effects in background areas. Background comparisons are inappropriate for the SLERA.
58. Figure 4-6: Modify Secondary Transport Mechanism for On-Site Surface Water to Off-Site Fish/Shellfish. It is unclear how "Biotransfer" transports contaminants from on-Site surface water to off-Site fish/shellfish.
59. Figure 7-4: Add bar to Great Blue Heron/Far field/1. See changes to Table 7-3.
60. Appendix E. Toxicological Benchmarks for Wildlife: Chromium/Mink - Change from null value to 4.497 for Cr VI (the Cr VI benchmark was used for aquatic life).
61. Appendix E. Chronic Surface Water Criteria for Aquatic Life: Silver/Section 302:208 g Criteria (and criteria for ERA comparison) - Change from 1 to 5. There are Region 5 surface water numbers for cobalt, vanadium, antimony and beryllium, Region 5 sediment numbers for cobalt and Region 4 sediment numbers for antimony and silver.
62. Appendix E. Chronic Surface Water Criteria for Aquatic Life: Aluminum/CCC (and criteria for ERA comparison) - Change from blank to 0.87.
63. Appendix E. Toxicological Benchmarks for Wildlife: Selenium/Mink - Change from 1 to 4.318E-04.

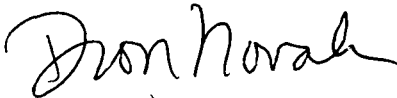
64. Appendix G. Hazard quotients for aquatic life based on surface water exposures: Adjust the number of significant digits, particularly where "0.00" is listed. TRVs should be included in these tables for sediments.
65. Appendix G. Hazard quotients for aquatic life based on surface water exposures: Indicate in footnotes what blank cells represent (not sampled or no value available).
66. Appendix G. Hazard quotients for aquatic life based on surface water exposures: Re-calculate hardness-dependent screening values for East off-Site near field and East off-Site far field (screening values are listed as the same although the hardness differs).
67. Appendix G. Hazard quotients for aquatic life based on surface water exposures: Re-calculate hardness-dependent screening values in the West off-Site near field (errors were noted).
68. Appendix G. Hazard quotients for piscivores based on surface water exposures: Adjust the number of significant digits, particularly where "0.00" is listed.
69. Appendix G. Hazard quotients for piscivores based on surface water exposures: Remove screening value and HQs for iron.
70. Appendix G. Hazard quotients for aquatic life based on sediment exposures: Recommendation is to shade all hazard quotients that are greater than one, or indicate in the footnotes that only those that are greater than LELs were shaded to prevent confusion.
71. Appendix G. Hazard quotients for aquatic life based on sediment exposures: Add shading to Chromium LEL HQ in West-Background Tributary to South of Site.
72. Appendix G. Hazard quotients for aquatic life based on sediment exposures: Add shading to Manganese LEL HQ in West-Background Tributary to West of Site.
73. Appendix G. Hazard quotients for aquatic life based on sediment exposures: Re-calculate all nickel HQs (except the ERL HQ, which was correct) and add appropriate shading in West Off-Site Near field (errors were noted).

74. Appendix G. Hazard quotients for aquatic life based on sediment exposures: Recalculate ERL, ERM, TEL, and PEL HQs for zinc in East-Background (errors were noted).
75. Appendix G. Hazard quotients for aquatic life based on sediment exposures: Add shading to arsenic and nickel LEL HQs in East-Off-Site Near field.

Because of the large volume of comments and the significant errors and omissions from the SLERA identified by these comments, EPA hereby notifies the Parties that if the revised SLERA does not completely address the comments outlined above, EPA reserves the right to complete the necessary revisions to the SLERA for inclusion in the administrative record for site remedy decisions. Please resubmit the revised document in accordance with the schedule contained in the RI/FS workplan.

If you have any questions regarding these comments, please contact me.

Sincerely yours,



Dion Novak
Remedial Project Manager

cc: C. English, CH2M Hill
R. Lanham, IEPA
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